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1200 19TH STREET, N.W.

SUITE 500

WASHINGTON, D. C. 20036

(202) 955-9600

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December 4, 1997

ROBERT J. AAMOTH

DIRECT LINE (202) 955-9676

E-MAIL: raamoth@kelleydrye.com

Ms. Magalie Roman Salas  
Secretary  
Federal Communications Commission  
1919 M Street, N.W.  
Room 222  
Washington, D.C. 20554

RECEIVED

DEC 4 - 1997

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

Re: Ex Parte Presentation in CC Docket No. 96-262

Dear Ms. Salas:

Today Mr. Joseph Gillan and I, on behalf of the Competitive Telecommunications Association ("CompTel"), met with Mr. John Nakahata in Chairman Kennard's office regarding the above-referenced proceeding. In that meeting, we discussed CompTel's pending petition for expedited reconsideration in CC Docket No. 96-262, focusing upon CompTel's request that the FCC eliminate the presubscribed interexchange carrier charge ("PICC") for multiline business customers and modify its new rules governing the tandem switching rate. In addition, we raised potential implementation problems with the new access rules and policies that take effect on January 1, 1998. CompTel strongly opposes the back-billing of multi-line business PICCs by incumbent local exchange carriers because it would be difficult if not impossible for long distance carriers to recover such costs from their subscribers. We distributed the attached materials at these meetings.

Respectfully submitted,



Robert J. Aamoth

cc: Mr. John Nakahata

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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

Carol Ann Bischoff  
Vice President, Legislative &  
Regulatory Affairs  
cbischoff@comptel.org

December 1, 1997

Mr. Kalpak Gude  
Counsel  
Communications Subcommittee of  
the Senate Committee on Commerce  
227 Hart Senate Office Building  
Washington, DC 20510

Dear Kalpak:

Thank you for meeting with CompTel recently to discuss several issues of mutual concern, including the FCC's *Access Charge Reform Order*. As you are aware, a major component of this decision was to shift a portion of the subsidy currently collected from interexchange access usage to business customers based on the number of local (and thus access) lines that they use. This new subsidy is collected by a \$2.75 per line charge that will be assessed on the business customer's presubscribed interexchange carriers (i.e., the multi-line business PICC) effective on January 1, 1998.

CompTel opposes this arbitrary reassignment of subsidy from usage to business customers because it simply introduces a new form of implicit subsidy -- in clear conflict with the underlying goals of the Telecommunications Act. One of the principal dangers of implicit subsidies is that they are arbitrary, discriminatory and frequently lead to greater problems than they solve.

CompTel has been particularly concerned with the multi-line business PICC because its members disproportionately serve business customers that rely on a large number of local lines in their businesses. As such, the Commission's *Access Charge Reform Order* unjustly shifts a large portion of this implicit subsidy on CompTel's members and its customers.

Just as the multi-line business PICC inequitably affects customers and interexchange competition, however, recent information suggests that it inequitably affects certain states as well. As part of its implementation procedures, U S West has provided carriers with estimated impact statements that summarize their change in access costs caused by the *Access Charge Reform Order*. The statement provided one of our members in Arizona appears to also provide a summation of the impact on all carriers providing interstate services in that State. This impact statement shows that the effect on Arizona consumers collectively is as follows:

Current Interstate Access Revenues In Arizona	\$ 124,886,619
Proposed Interstate Access Revenues In Arizona	<u>\$199,775,865</u>
Increase	\$74,889,246
Percentage Increase	+60%


Mr. Kalpak Gude  
December 1, 1997  
Page two

In other words, effective January 1, 1998, Arizona consumers will experience an *increase* in the cost of interstate long distance services of *nearly \$ 75 million*, simply because the FCC's *Access Charge Reform* policy rearranges the implicit subsidy in access service by imposing more of the subsidy on multi-line business customers.

On July 11, 1997, CompTel filed a *Petition for Expedited Reconsideration* of the *Access Charge Reform* proceeding that currently is pending before the FCC. CompTel believes that the Commission's decision to arbitrarily increase the implicit subsidy on multi-line business customers is fundamentally inequitable to these customers and the carriers that serve them. The U S West analysis -- which was not available to the FCC when it adopted its decision -- appears to indicate that it is inequitable to entire states as well.

Although CompTel's member company confirmed with U S West that its impact statement does disclose an expected statewide impact, CompTel does not have access to the data necessary to independently confirm this conclusion or validate U S West's analysis. Therefore, CompTel respectfully encourages Chairman McCain to request such information from the FCC so that the potential effects of this decision can be fully understood and CompTel's *Reconsideration Petition* promptly addressed.

Sincerely,



Carol Ann Bischoff  
Vice President  
Legislative and Regulatory Affairs

**STATE OF NEW YORK  
PUBLIC SERVICE COMMISSION**

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In the Matter of

Petition of New York Telephone Company for	)	
Approval of the Statement of Generally Available	)	
Terms and Conditions Pursuant to Section 252 of	)	Case 97-C-0271
the Telecommunications Act of 1996 and Draft	)	
Filing of Petition for InterLATA Entry Pursuant	)	
to Section 271 of the Telecommunications Act of	)	
1996 to Provide In-Region, InterLATA Services	)	
in the State of New York	)	

**AFFIDAVIT OF JOSEPH GILLAN  
ON BEHALF OF THE  
COMPETITIVE TELECOMMUNICATIONS ASSOCIATION (COMPTEL)**

STATE of Florida                    )  
COUNTY of Volusia                )

Joseph Gillan, being first duly sworn upon oath, do hereby depose and state as follows:

1. My name is Joseph Gillan. I am a consulting economist with a practice specializing in the telecommunications industry. My clients span a range of interests and have included state public utility commissions, consumer advocate organizations, local exchange carriers, competitive access providers and long distance companies.

2. I am a graduate of the University of Wyoming where I received B.A. and M.A. degrees in economics. From 1980 to 1985, I served on the staff of the Illinois Commerce Commission where I had responsibility for policy analysis relating to the emergence of competition in regulated markets, in particular the telecommunications industry. While on the staff of the Commission, I served on the staff subcommittee for the NARUC Communications Committee and was appointed to the Research Advisory Council overseeing NARUC's research arm, the National Regulatory Research Institute.

3. In 1985 I left the Commission to join U.S. Switch, a venture firm organized to develop interexchange access networks in partnership with independent local telephone companies. At the end of 1986, I resigned my position of Vice President-Marketing/Strategic Planning to begin a consulting practice. I have testified extensively before several dozen state

public utility commissions, four state legislatures, the Federal-State Joint Board on Separations Reform, and the Commerce Committee of the United States Senate. I currently serve on the Advisory Council to New Mexico State University's Center for Regulation.

4. The purpose of my affidavit is to address Bell Atlantic-New York's (BA-NY) claim that it has implemented the operational support systems to provision unbundled network elements (UNEs) at a level sufficient to meet projected demands.<sup>1</sup> As a threshold matter, BA-NY's claim is premised on a dramatically reduced projection -- a reduction of more than 67% -- of competitive activity for 1998.<sup>2</sup> Thus, BA-NY appears to have adopted the age-old solution to performance below expectation -- lower the expectation to fit the performance.

5. A closer examination of the documentation "supporting" BA-NY's claim that its OSS systems are capable of handling commercial UNE volumes reveals a starker truth -- BA-NY's claim is based almost entirely on the platform combination that it no longer will offer.<sup>3</sup> The evidence that BA-NY offers is an "end-to-end" analysis performed by Coopers and Lybrand.<sup>4</sup> Significantly, more than 98% of the UNE orders tested by Coopers and Lybrand were *platform* orders -- even though BA-NY now refuses to offer this arrangement.<sup>5</sup>

6. Overall, BA-NY's affidavits demonstrate the inherent discrimination embedded in its decision to deny carriers access to network element combinations. These affidavits demonstrate that BA-NY's position (if allowed by the Commission) would introduce substantial delay in transferring customers to competitors, increase provisioning errors, dramatically reduce BA-NY's ability to support competition and unnecessarily increase its costs -- costs which it would undoubtedly attempt to impose on its competitors.

7. BA-NY's position that any platform order should be separated and provisioned as though it were a request for an unbundled loop is inherently discriminatory. Importantly, the Coopers and Lybrand analysis documents this discrimination by demonstrating that BA-NY is unable to provision and support unbundled loops in the same time frames, and at the same

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<sup>1</sup> Affidavit of Gary Butler on behalf of Bell Atlantic - New York , page 4.

<sup>2</sup> BA-NY's original projection for UNE-based competition contained in Jonathan Smith's Exhibit 1 indicated 135,884 links and 203,819 combinations for a total of 339,703 UNE-based arrangements. BA-NY's revised projection (Exhibit 2 to Smith's Affidavit), however, expects only 85,244 links and 24,205 ports by year-end 1998.

<sup>3</sup> I would note that CompTel does not believe that BA-NY can withdraw its offer of platform combinations as presumed by its Affidavits.

<sup>4</sup> The "end-to-end" testing methodology and results are presented in Affidavit of Gerard Mulcahy on behalf of Bell Atlantic (Mulcahy Affidavit).

<sup>5</sup> For instance, of the 1,236 "peak day" orders tested by Coopers and Lybrand, 1,223 orders were platform orders. Only 13 orders were for unbundled loops obtained individually. Exhibit E-6 (page E-30), Attachment 1, Mulcahy Affidavit.

capacity levels, as platform orders. Exhibit 1 to this affidavit compares the service intervals and capacity levels for the UNE platform and individual orders documented by BA-NY's affidavits.

8. Although the Examiner's Ruling Concerning the Status of the Record did not specifically request comment on BA-NY's provisioning of network element combinations,<sup>6</sup> BA-NY's revised position raises new and important issues that must be addressed before BA-NY can be authorized to provide in-region interLATA services. Although the decision of the Eighth Circuit vacated the FCC's requirement that BA-NY *combine* the network elements themselves, this Commission has not excused BA-NY from a comparable obligation under state law, nor has BA-NY adequately explained how it intends to provide entrants non-discriminatory access to combine elements in the BA-NY network.<sup>7</sup>

9. BA-NY's policy to deny entrants access to network element combinations creates a number of significant barriers to competition. In practical terms, BA-NY's position is that if an entrant is requesting a loop and port, and the loop and port are already connected, BA-NY intends to first disconnect these facilities before providing them to the entrant. This physical disruption to network elements will have four principal effects:

- \* an additional delay transferring customers to new local providers (caused by the time that it takes to disconnect and reconnect network elements),
- \* an otherwise avoidable service outage when a customer changes local carriers,
- \* an increased probability of human error caused by the insertion of unnecessary manual activities (such as disconnecting and reconnecting network elements), and
- \* finally, the additional cost to separate network elements into individual components and then reconnect them.

10. Denying access to the platform combinations will have a serious impact on the development of local competition in New York. BA-NY's own projections *had been* that the platform would represent 60% of its network element competition by 2001.<sup>8</sup> Network element-based competition is crucial to local competition because it fosters price competition and brings

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<sup>6</sup> Ruling Concerning the Status of the Record, Case 97-C-0271, issued July 8, 1997.

<sup>7</sup> BA-NY's proposal to deliver network elements to an entrant's collocation cage *does not* provide non-discriminatory access to the BA-NY network as assumed by the Eighth Circuit.

<sup>8</sup> BA-NY Exhibit Smith-1, attached to Affidavit of Jonathan B. Smith, page 1.

competitive activity to the switched access market.<sup>9</sup>

11. Residential (and small business) competition is particularly sensitive to achieving non-discriminatory access to platform combinations. To compete for smaller customers, entrants must be able to easily and routinely use network elements to offer services -- a task made far easier when network elements can be obtained in a platform configuration.<sup>10</sup> BA-NY's data shows that 90% of the platform orders to date are used to serve residential customers, while essentially all unbundled loop orders serve business customers.<sup>11</sup> Residential competition is dependent upon the continued availability of the platform.

12. In 1995, more than 42 million customers changed their long distance carrier, many within 24 hours of making the decision.<sup>12</sup> If most consumers prefer one stop shopping, then the level of competition for the compulsory service in the package -- local phone service -- will affect competition in all related markets. In this sense, local service competition will become the "pace car" for the competitive market of the future. Eliminate local competition for residential (and small business) consumers and BA-NY will enjoy a dramatic advantage among these customers for interLATA services as well.<sup>13</sup>

13. The gratuitous disruption of network elements not only precludes competition, it significantly impacts other important policies as well. Both the FCC's access reform and universal service decisions presume that network elements can be used by entrants to rapidly and broadly serve residents and small businesses. In its access reform decision, the FCC assumed that entrants would be able to use network elements to offer access services in competition with the incumbent and that, therefore, access prices need not be prescribed by the FCC. Similarly, the FCC's universal service system assumes that consumers will have a choice between an incumbent and competitor, with either qualifying for subsidy if the network cost in a particular area is unacceptably high. Both assumptions are nullified by any action which significantly

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<sup>9</sup> Resale-based competition will not constrain BA-NY's retail prices because the reseller's costs rise in parallel with any retail price increase implemented by BA-NY. Furthermore, service-resale promotes BA-NY's access monopoly because BA-NY continues to provide access service to the service-resellers' customers.

<sup>10</sup> BA-NY admits that its outside contractor was able to hire and train "in just a few weeks" a group of people to handle simple platform orders. Attachment 1 to Mulcahy Affidavit, page 5.

<sup>11</sup> Attachment 1 to Mulcahy Affidavit, page 5.

<sup>12</sup> Peter K. Pitsch, The Long Distance Market is Competitive, PITSCH COMMUNICATIONS, September 3, 1996, page 2.

<sup>13</sup> Merrill Lynch as reported that residential and small/medium size business customers generate more than 70% of the interLATA long distance revenues. Merrill Lynch Telecom Services Bulletin, May 14, 1996, Appendix 2 (previously published on March 21, 1996). Consequently, if BA-NY succeeds in gaining an artificial advantage in this market segment, it would enjoy a substantial competitive advantage in the interLATA market overall.

limits the commercial usefulness of network elements.

14. It makes no sense to create an environment where each time a customer changes local telephone companies, a technician from the customers' *old* local telephone company begins disconnecting facilities to the customer's home or business -- followed on its heels by a technician from the customer's *new* local telephone company, reconnecting these same facilities to reestablish phone service. Yet, this is precisely the environment that BA-NY apparently demands. The inevitable result is discrimination and market domination -- outcomes which the New York Commission should reject.

15. In conclusion, BA-NY currently cannot meet checklist item (ii) requiring that it provide competitors with nondiscriminatory access to network elements in accordance with the requirements of Sections 251(c)(3) and 252(d)(1) of the 1996 Telecommunications Act. Moreover, BA-NY will be further from compliance with this checklist item when it no longer provides network elements in combination for competitors.

16. This concludes my affidavit.

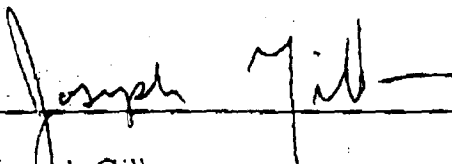


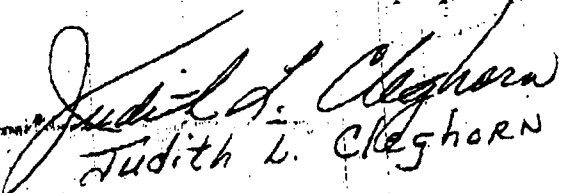
**The Discrimination Created by Denying Entrants  
Access to Network Element Combinations**

<b>Measure</b>	<b>Platform Combination</b>	<b>Loop and Port As Separated Elements</b>
Customer Mix	90% Residential <sup>a</sup>	100% Business <sup>a</sup>
Expected 1998 Demand	203,819 lines <sup>b</sup>	24,205 line ports <sup>c</sup>
Expected 2001 Demand	1,475,107 lines <sup>b</sup>	418,053 line ports <sup>c</sup>
Customer outage when changing carriers	Imperceptible	5 minutes <sup>d</sup>
BA-NY daily order capacity <sup>e</sup>	1,773	255
Order Rejection Rate <sup>f</sup>	0.6%	23.0%
Order Confirmation Timeliness (hours:minutes) <sup>g</sup>	1:28	33:00
Order Confirmation: Target Timeliness <sup>h</sup>	24 hrs	48 hrs
Order Confirmation: Percent within Target <sup>h</sup>	100%	70%
Order Reject Timeliness (hours:minutes) <sup>i</sup>	2:56	40:00
Order Reject: Target Timeliness <sup>j</sup>	24 hrs	48 hrs
Order Reject: Percent with Target <sup>j</sup>	100%	67%

- a. Attachment 1 to Affidavit of Gerard Mulcahy, page 5.
- b. Smith Affidavit, Exhibit 1.
- c. Smith Affidavit, Exhibit 2.
- d. Butler Affidavit, page 8.
- e. Mulcahy Affidavit, Attachment 1, page 11.
- f. Mulcahy Affidavit, Exhibit E-7, page E-31.
- g. Mulcahy Affidavit, Exhibit E-7, page E-31.
- h. Mulcahy Affidavit, Exhibit E-7a, page E-32. Percent within target for unbundled loops is the 3 day average of the test.
- i. Mulcahy Affidavit, Exhibit E-7, page E-31.
- j. Mulcahy Affidavit, Exhibit E-7a, page E-32. Percent within target for unbundled loops is the 3 day average of the test.

I hereby swear, under penalty of perjury, that the foregoing is true and correct, to the best of my knowledge, information and belief.

  
Joseph Gillan

  
Judith L. Cleghorn



Judith L. Cleghorn  
MY COMMISSION # CC690558 EXPIRES  
January 4, 2002  
BONDED THRU TROY FAY INSURANCE, INC.

BEFORE THE  
NEW YORK PUBLIC SERVICE COMMISSION

-----X  
Petition of New York Telephone Company :  
for Approval of its Statement of Generally :  
Available Terms and Conditions Pursuant to :  
Section 252 of the Telecommunications Act :  
of 1996 and Draft Filing of Petition for InterLATA : Case 97-C-0271  
Entry Pursuant to Section 271 of the Telecom- :  
munications Act of 1996 to Provide In-Region, :  
InterLATA Services in the State of New York :  
-----X

**AFFIDAVIT OF GERARD J. MULCAHY**  
**ON BEHALF OF BELL ATLANTIC - NEW YORK**

STATE OF NEW YORK     }  
                                      }  
COUNTY OF NEW YORK   }     ss:

Gerard J. Mulcahy, being duly sworn upon oath, deposes and states as follows:

1.     My name is Gerard Mulcahy and I am a Principal in Coopers & Lybrand  
L.L.P.'s ("C&L") Telecommunications & Media Consulting Practice. My  
business address is 1301 Avenue of the Americas, New York, NY 10019.
2.     The purpose of my affidavit is to present the results of our review of BA-NY's  
delivery of Operations Support Systems ("OSS") used to provide wholesale  
services to CLECs.

**B. SUMMARY OF AFFIDAVIT**

6. I led the multi-disciplinary C&L team which reviewed Bell Atlantic-New York's ("BA-NY"), formerly New York Telephone, OSS with respect to its ability to provide services to Competitive Local Exchange Carriers ("CLECs"). Our review focused on the OSS support made available by BA-NY to CLECs. The C&L team was comprised of consultants with experience and relevant backgrounds in telecommunications, systems consulting, process engineering, simulation modeling, and telecommunications regulation.
7. Our review was conducted over a period of approximately 70 days, and among other things, tested the ability of the current OSS's to actually process projected 1998 activity volumes within the performance standards specified by the company. Specifically, we reviewed a test in which BA-NY processed over 15,000 orders in three days and compared the test results to the company's performance targets. Additionally, our review included analysis of BA-NY's current OSS functionality, capacity, and performance to assess comparability to retail operations.
8. Overall, our analysis demonstrated that the company can successfully process expected total 1998 order volumes. Furthermore, the test results showed that the company can process these volumes at performance levels consistent with either company standards or retail operations. I have provided below a summary of our key findings for each of the five process areas covered in the review. Detailed descriptions of our analyses, with supporting exhibits, for pre-order, order,

data also showed comparable performance for wholesale and retail provisioning operations in terms of meeting performance targets. In addition, we performed a time and activity study which concluded that BA-NY can currently complete UNE-loop conversions for at least 285 lines per day per central office. Although regionwide capacity is now limited to 300 lines per day because of current staffing levels for centralized functions, this constraint can easily be relieved with the redeployment of existing personnel.

#### **Billing**

12. Our test showed that BA-NY accurately accounts for usage associated with wholesale customer calls. In addition, we found that BA-NY consistently delivers the usage data to CLECs within defined performance parameters.

#### **Maintenance and Repair**

13. The results of time and activity studies of the trouble reporting component of the M&R process shows comparable retail and wholesale performance levels. In addition, our analysis confirmed that the trouble resolution system is the same for wholesale and retail operations.
14. Over the course of the design and implementation of the tests, BA-NY was able to use pre-testing trials to identify problems in its systems and to institute corrective action that significantly improved throughput and processing performance. During this time, the company also continued to extend and enhance its operational support systems in order to serve CLECs.

customer's services as requested by a CLEC.

*Billing:* The processes by which BA-NY collects and reports customer usage data, distributes the data to the appropriate CLECs, facilitates adjustment and claim processing, and bills CLECs for wholesale services.

*Maintenance & Repair (M&R):* The processes by which BA-NY assists a CLEC in identifying, analyzing, and resolving problems (i.e., "troubles") reported on resold or Unbundled Network Element ("UNE") services furnished to a CLEC customer.

16. We reviewed the operational support systems for the stated wholesale delivery processes in light of the following criteria:

**REVIEW CRITERIA**

*Functionality:* Do the operational support systems deliver the process functions which BA-NY has indicated are required to support CLEC market entry?

*Capacity:* Is BA-N capable of receiving and processing the volumes that are expected from current and 1998 anticipated CLEC operations?

*Parity/Performance:* Can BA-NY process current and anticipated volumes at performance levels similar to BA-NY's retail operations, or at the performance levels specified by company targets?

**REVIEW APPROACH BY PROCESS**

17. We designed our approach to ensure that we addressed all five processes against each of the review criteria. An integral part of the approach was the design of an end-to-end test that simulated actual CLEC orders going through BA-NY's

Third, we evaluated the results of the end-to-end test to measure the company's ability to process expected 1998 volumes.

#### **Provisioning**

20. To evaluate the functionality, capacity and performance of the wholesale provisioning process, we employed three separate analyses. First, we used a sample of comparable retail and wholesale service orders to evaluate systems and databases for commonality of process. Second, we used historic performance data and the results of the end-to-end test to measure performance for wholesale and retail operations as well as the company's ability to process the level and type of orders included in the 1998 test volumes. Third, because of their special provisioning requirements, we conducted time and activity studies of live production orders to determine the company's capacity to provision UNE-loop conversion orders.

#### **Billing**

21. Our analysis of the billing process focused on measuring the timeliness of the production and distribution of the customer daily telephone usage data files to CLECs, and assessing the commonality of the process for capturing usage data across wholesale and retail operations. We also tested the accuracy of the company's processes for recording usage data through an analysis of test calls.

#### **Maintenance and Repair ("M&R")**

22. M&R was evaluated independently of the end-to-end test and other analysis. The key objective of our review was to understand areas of process commonality and

which used available and unused company lines, and actual BA-NY employee accounts as the source of its service orders. The UNE-loop and Centrex order types were limited to the number of existing production orders actually submitted by CLECs because of the difficulty in constructing these types of orders for delivery through the "test CLEC". Exhibit C-1 shows total test volumes.

26. The total volumes processed during the test were designed to stress the processes and systems and exceed 1998 projected volumes. Because of its importance to the end-to-end test, we evaluated the company's test volumes for reasonableness. Specifically, we compared the test volumes to the company's 1998 projected wholesale volumes.
27. The results of our review of the company's projections appear in Exhibit C-2. As the exhibit shows, we found that the test volumes were significantly greater than 1998 projections. Additionally, we determined that the test volumes also generally reflected the distribution of order types projected for 1998.
28. A central feature of the test was the establishment of a test-CLEC that simulated the operations of an actual CLEC placing orders in BA-NY's New York market. The test-CLEC performed typical CLEC functions, including: (1) transmitting the order requests to BA-NY via the electronic gateways; (2) responding to a subset of queries from BA-NY to test that the function worked (where there was an error or omission pertaining to the service request); and (3) receiving firm order confirmations (indicating that the service request was ready for provisioning) and service order completion notices (indicating that provisioning was complete).



## **ATTACHMENT 1**

### **DETAILED ANALYSIS**

#### **D. Detail of PRE-ORDER ANALYSIS**

##### **Objective**

The objective of the pre-order analysis was to evaluate the system's ability to provide access to the correct customer records and the databases necessary to produce a service request. Specifically, we assessed the company's capacity to process expected 1998 volumes of pre-order transactions and we evaluated relative wholesale and retail pre-order transaction performance.

##### **Current Situation**

Most CLECs currently access pre-order information using a Web site developed for wholesale customers. CLEC service representatives enter customer information into fields on the site, then forward the request to BA-NY. The requested information is compiled from the back-end systems and sent to the CLEC in a standardized readable format. At that time, the CLEC can either read the information on the screen or print it out.

CLECs can also access pre-order information by constructing their own applications that work directly with the company's systems. BA-NY has published standards and parameters (BA-NY's EIF protocol) describing the requirements for these application-to-application interfaces.

Exhibit D-1 and D-2 present schematics of how the company's wholesale and retail pre-order systems interact with legacy back-end systems to support pre-order functionality, by order type. As exhibit D-1 shows, the same systems and databases are used by both the wholesale and retail operations.

Exhibit D3-a presents historical pre-order transaction volumes. As the exhibit shows, a total of approximately 118,000 mechanized pre-order transactions were processed by the company during the January to September 1997 period. Using September data (the highest month), this equates to an average daily pre-order transactions volume of approximately 1,500 per day. The company currently tracks volume levels for five pre-order transaction types including customer service records retrievals, address validations, product and service availability queries, due date availability queries, and telephone number availability and reservation. The majority (over 75%) of wholesale pre-order transactions for September 1997 were requests for customer service records.

pre-order transactions per order (the current ratio is 2.6 transactions per order). This calculation provided a per day transaction volume of approximately 30,400 or 3,800 per hour, assuming an 8 hour day. We also assumed that these transactions would not be spread evenly throughout the day; rather they would peak at certain hours during the day. We therefore increased the average hourly value of 3,800 by 50% to 5,700 transactions per hour.

The stress test response time performance was compared to historic wholesale response time metrics to assess the system's relative performance in a high volume situation.

## **Results**

The results of our review showed that the company currently provides the functionality to allow CLECs to conduct pre-ordering activity for the resale and UNE services included in the test and can do so at performance levels within 4 to 10 seconds those experienced by retail operations.

The results of the electronic stress test show that the company can process under existing systems capacity, at least 5,765 pre-order transactions per hour or 46,120 per eight hour day. This is more than three times the anticipated 1998 average volume of 15,245 total transactions per day, (see Exhibit D-5).

At these high volumes, the average CSR response time during the stress test was 7.7 seconds; the average response time for the other pre-order transaction types was 17.2 seconds. This compares to retail performance of 0.1 and 0.6 respectively for CSR and other transaction types for the same time period. Details of the stress test results are shown in Exhibit D-4.

Under typical operating conditions, the pre-order performance levels improve significantly. During the two average days of the end-to-end test CSR, response time was 4.7 seconds and other transaction response time was 10.6 seconds. This level of response time was supported by September results showed CSR response time at 3.1 seconds and other transaction response time at 11.1 seconds (see exhibit D-3b).

To put the difference in wholesale and retail response time in perspective, it is worthwhile to consider a practical example. A new line customer service order contact presently takes BA-NY on average 25 minutes to complete and typically requires four pre-order transactions (one CSR and three other transaction types). Assuming it would take a CLEC approximately the same amount of time for the same order type, the incremental difference for the wholesale processing time over retail amounts to 58 seconds or about 4% of total customer contact time, if we use the higher response times measured during the stress test. If we use the times measured on the two average days of the end-to-end test, this difference drops to 35 seconds or only 2.3%.

BA-NY's UNE-loop order center has been operational since June 1995. Although the company provides CLECs with the ability to send orders electronically, approximately 95% of orders have been received by fax. Today, almost 100% of the UNE-loop orders are business orders. UNE-loop conversions accounted for over 50% of total UNE-loop orders from January 1997 through June 1997. Other order types include new line orders, disconnects, interim number portability only (INP) orders, and complex orders (Centrex, ISDN, etc.). To date, BA-NY has received very few for unbundled switching. Ten CLECs are currently sending UNE-loop orders to the company.

The New England UNE center has been operational since June 1997 and has received approximately 209 orders for UNE-Platform since the center began operating. All UNE-platform orders are transmitted electronically over EIF. Today, the order mix consists of 10% business and 90% residential orders. Conversion orders ('as is' and 'as specified') are predominant. Other order types include new line orders, subsequent orders and inter-office facilities orders. Two CLECs are currently sending orders to this center.

ICT has been working with BA-NY since October 1996 and has, as of September 30, 1997, processed over 11,300 orders. At present, all orders for ICT processing are routed electronically from BA-NY to ICT. Thus far, ICT has processed only those live simple resale orders requiring manual intervention. However, as part of the end-to-end test ICT personnel hired and trained, in just a few weeks, a group of people to handle simple platform orders. ICT has established training and infrastructure to increase the number of representatives to handle order volumes as needed.

#### Resale Order Process

All CLEC orders are sent electronically via a Web interface or a custom-designed CLEC EIF or EDI interface. Exhibit E-1a shows a process flow of the wholesale resale order process. As the exhibit shows, orders are received by BA-NY through the wholesale ordering interface that gives the CLECs access to BA-NY's OSS. The following paragraphs describe how an order is processed after the company receives it.

First, the order is checked electronically in the wholesale ordering interface for certain types of basic errors (e.g., the required number of pages for a service order). If an error is detected, the order is automatically sent back to the CLEC along with a description of the error.

Second, the order can pass through the wholesale ordering interface into the order processor where it is also checked for other types of errors (e.g. content errors, wrong billing telephone number, etc.). If errors are found in the order at this point, the order is sent back electronically, along with a description of the error to the CLEC for correction. In September, an average of 25% of the orders were sent back to the CLEC.

Third, an order can reach the order processor system and "drop out" for manual processing by the Resale Service Center or ICT. Orders that follow this path include simple resale order types that have not yet been designed to flow-through the order

In the UNE-loop center, once a faxed order is received, it is reviewed by one of the center area managers, entered into an order log, and distributed to a service order representative. The service order representative checks the order for errors. If there are errors, the service order representative calls to alert the CLEC and waits for a response. If there are no errors, (or once a response is received), the service order representative double checks pre-order activities, and then begins typing the order into the service order processor. Once the service order representative completes entry into the order processor, he/she documents relevant order information to be sent to the BA-NY Installation and Maintenance group, and completes an order confirmation sheet to fax to the CLEC.

Potential delays may result along the ordering process for CLECs who do not use the electronic interface. These CLECs can only perform CSR pre-order activities and not other pre-order activities. As a result, orders generated by these CLECs may not have undergone an adequate level of pre-order verification which may cause delays in the order process.

#### Complex Order Process

All orders requiring design, as well as resale orders over 20 lines and UNE-loop orders over nine lines, require manual order processing. Order activities are more time-consuming with complex orders. For example, UNE orders with over nine lines require the BA-NY service order representative to call BA-NY engineering the BA-NY technical center to request pre-survey work, and the BA-NY underground center to reserve lines. Centrex orders require the BA-NY service order representative to call the engineering center to request pre-design work and the Line Assignment Center to reserve a cluster of lines. The same group using the same systems and processes for both retail and wholesale orders handles complex orders.

#### CLEC Notification during the Order Process

CLECs receive notifications from BA-NY at various points in the order process, including confirmation or rejection of the order and completion of the order. The performance measures used in the ordering process measure the timeliness of notification to the CLEC at each stage of the process. Exhibit E-4 shows the stages of the ordering process when the CLEC receives notification from the company.

If the electronic order is prepared or written incorrectly, the CLEC will receive an error message indicating that the CLEC's order cannot be accepted by the wholesale ordering interface or the order processor. The error description is attached to the order and sent back to the CLEC for correction. The CLEC also receives a 'query' from a BA-NY service order representative if the order requires manual attention, the details of which are contained in the *order rejection notification*. Historically the company has only tracked rejects for potential flow-through orders, i.e., Level 5 orders. Exhibits E-5c and E-5e provide more historical results for order reject rates and timeliness of order rejection notification, respectively.

To evaluate the functionality of the ordering process systems, we reviewed historic performance relative to live production. We also included the dominant order types within the end-to-end test that the company expected at that time, to receive in 1998. Our review of the end-to-end test results allowed us to evaluate the functionality of the ordering process for each of these order types.

To evaluate ordering performance, we reviewed historical data and the results of the end-to-end test. These results for the ordering process were evaluated relative to the standards established by the company. The specific ordering metrics employed during the end-to-end test included:

- Order Volume By Type
- Percent Flow-Through
- Order Reject Rate
- Order Reject Timeliness
- Order Confirmation Notification Timeliness
- Order Completion Notification Timeliness

## Results

The results of the end-to-end test indicate that BA-NY is capable of processing expected 1998 total order volume through its ordering processes, while operating at performance levels that meet or exceed the company's standards. During the high volume day of the end-to-end test, the company successfully processed 7,453 orders through the ordering process. This is approximately six times the company's projection for a 1998 average day. (See Exhibit C-2). Over the three days of the test, the company successfully processed a total of 15,330 service requests to order confirmation. See Exhibit E-6 for a further breakdown of orders processed by day. During the same time frame, 1,140 orders were rejected by the company and sent back to CLECs due to errors detected by the ordering OSSs. The following table shows the processing of test orders during the three-day end-to-end test.

	Resale	UNE	Total
Total Orders Processed	12,865	2,465	15,330
Flow-through	11,131	0	11,131
Manual Processed	1,734	2,468	4,202
Confirmed	11,748	2,445	14,193
Rejected	1,117	23	1,140

The test also demonstrated that the company could identify and process CLEC errors. This includes errors detected as the order initially entered the ordering interface as well as errors detected by the back-end ordering OSSs. Specifically, the test CLEC intentionally submitted 20 errors during the end-to-end test. All of these errors were detected by the company and returned to the test CLEC with electronic notifications of

In addition to these timeliness measures, we also monitored BA-NY's flow-through capabilities. During the test, 87% of resale orders and 73% of total orders submitted flowed-through the ordering processes without manual intervention. As demonstrated by the end-to-end test, the ordering OSSs currently support flow-through capabilities for resale orders including resale new, resale as-is and certain resale with change order types.

Our review of the systems utilization for the above wholesale ordering system showed that there is also additional capacity available. Specifically, ordering systems capacity utilization averaged 35% during the two average volume days and 54% during the peak volume day. Systems utilization peaked at 66% during the peak day. The results of these tests are detailed in Exhibit E-9. The performance of each of the centers is also reflected in the detail provided in Exhibit E-10.

Our analysis of order system throughput shows that the current ordering OSS can process a maximum of 1,742 orders per hour. Assuming the systems were operating at capacity for an eight hour day, the company could process approximately 14,000 orders a day. Exhibit E-9 shows the throughput per hour and systems capacity utilization over the course of the end-to-end test.

During the pre-test preparation, the company added hardware components and tuned the software to significantly increase processing to the levels shown above. This was accomplished over a period of approximately three weeks. This indicates that, to the extent the limiting factor is similar hardware components, the company can further expand capacity in a relatively short period of time.

The results of our analysis of manual processing capacity show that the company's current capacity is approximately 4,510 orders per day covering all five order centers (Exhibit E-11). Exhibit E-10 shows the results of our time and activity studies, which were the basis of our estimate of processing times for each of the five order centers. Manual processing performance for each of the centers is shown in Exhibit E-12.

The table below shows current staffing levels, and our estimate of order capacity per day.

Order Center	Service Representatives	Average Processing Time Per Order	Estimated Order Capacity Per Day
NY UNE-loop Center	17	26.0	255
NE UNE-platform Center	30	6.6	1,773
NY Resale Center	39	13.0	1,170
NE Resale Center	31	18.0	672
ICT Overflow Center	11	6.7	640 (Resale)
<b>TOTAL</b>	<b>128</b>		<b>4,510</b>

In contrast to orders that are electronically provisioned through the existing retail process, the provisioning process for UNE-loop conversions (i.e., UNE-loop "hot-cuts") must rely on a largely manual process. The retail provisioning systems support the process, but a manual process is required to coordinate the physical "cut" of the service from BA-NY to the CLEC. No direct retail analog exists, and, therefore, performance is measured against a standard i.e., provisioning completion of UNE-loop orders within six days.

The Carrier Account Team Center (CATC) coordinates the activities of the Recent Change Memory Administration Center (RCMAC), central office, and, when relevant, the CLEC. The CATC coordinates the translations work (e.g., software updates at the switch) with the RCMAC and then calls the Central Office and the CLEC to manage the actual hot-cut. Through these calls, the CATC monitors progress in provisioning the orders, resolves problems, and coordinates the team's activities. Exhibit F-2 shows the process flow for the UNE-loop "hot cut" process.

Presently, the CATC and RCMAC have twelve and four people, respectively, dedicated to wholesale operations. The twelve CATC central office technicians perform coordination activities for the hot-cut. The four translation attendants at the RCMAC update the switch translations.

The metrics used by BA-NY for all orders except UNE-loop conversions focus on measuring the timelines of planned provisions (Installation Intervals Offered), the timelines of actual provisioning (Installation Interval Completed), and the percentage of orders that are not completed by the due date on the order confirmation (Percentage Missed Appointments). Our review of BA-NY's retail and wholesale historical performance metrics also indicates that the two processes are comparable and that in some instances the results for the performance of the wholesale orders are better than those of the retail orders. The historical average intervals offered and completed for resale orders requiring dispatch were better than the comparative retail intervals and within two days for orders requiring no dispatch. UNE-loop and UNE-platform historical offered and completed intervals are better than the resale equivalents. Similarly the quality of the wholesale provisioning processes as reported in the percentage installation troubles within 30 days is lower for wholesale orders compared to the retail comparatives. The company's performance relative to missed appointments for wholesale dispatch orders is better than the retail comparative. In September, 7% of resale orders were missed compared to 16% for retail orders. Orders requiring facilities or no dispatch have a low incidence of missed appointments, i.e. less than 1%. Details of historical performance measures are shown in Exhibit F-4a through F-4d.

## **Approach**

Our initial steps at defining the wholesale provisioning process included interviewing management and line personnel as well as reviewing internal documentation, covering methods and procedures, handbooks, and internal process maps. We interviewed

We also used the end-to-end test to complement our analysis. During the test we observed which order types were electronically processed through the provisioning systems, reviewed the functionality of the process, and compared the wholesale and retail processes. We also analyzed performance measurements captured during the end-to-end test to evaluate systems and processes ability to handle expected average daily 1998 order volumes.

## Results

Our review showed that the wholesale and retail provisioning processes are the same for all order types in the scope of our review with the exception of UNE-loop conversion orders. The company uses the same systems, supporting processes, trained staff, and capabilities to provision business and residential resale orders (new connects and conversions), complex resale (Centrex new connects and conversions), new unbundled loops, and unbundled platform orders, as it uses for its retail operations. Exhibit F-3 describes in detail the results of our analysis of the retail and wholesale order samples traced through the provisioning process.

The results of the end-to-end test confirmed historical performance. Key results for the test are shown in the following chart and further detailed in Exhibit F-5.

Performance Metric	Test – Resale orders	Test – UNE orders	Retail Cumulative
Installation intervals – offered (days)	1.9	1.8	0.8
Installation intervals – completed (days)	1.9	1.8	0.8
Percentage missed appointments	0	0	1.7

Results for the end-to-end test for all orders received over the three-day period and provisioned by October 22, 1997.

There are no measurements available for the end-to-end test orders where troubles are reported within thirty days of the date provisioned.

Our review of the systems utilization for this process showed that there is also additional capacity available in excess of that presently required to process orders. The results of these tests are summarized below and detailed in Exhibit E-8.

System	Peak Utilization
SOP	37%
FACS	38%
WFA	89%

Because they follow a distinctly different process from other wholesale/retail orders, we addressed UNE-loop conversions separately. The activities associated with a hot-cut are subject to state Commission requirements resulting from arbitrations that the



relates to the number of trained personnel, which currently is 12. Assuming the company redeploys other trained personnel from within the company, it could meet UNE-loop conversion volume increases.

While our analysis considered UNE-Platform orders, the Company has recently decided not to offer UNE-Platform. Based on our understanding of the process that the company will use for local switching, it will connect directly to a CLEC cross connect point with feeds from the main distributing frame and to the switch ports. As is the case with UNE-loops described above, the capacity constraint for loops and ports provisioned together is the laying-in of cable at the central office. At any given office, the amount of lay-in work associated with orders for loops and ports provisioned together is approximately twice that of a UNE-loop. Therefore, if a central office were to perform only those lay-ins necessary for the provisioning of loops and ports, its capacity to provision loops and ports together would be roughly half that of its capacity to provision UNE-loops. Therefore, we would estimate that the daily capacity for provisioning loops and ports in combination is between 143 and 385 lines per day per central office. Because of the way the company intends to provision this service, there should not be any capacity constraints at the RCMAC or CATC.

## **G. Detail of BILLING ANALYSIS**

### **Objective**

The purpose of the billing analysis was to evaluate the ability of the company to capture and provide CLECs with accurate wholesale usage data in a timely manner. We did not evaluate the accuracy of the wholesale bill or the amounts charged for each service or product type.

### **Current Situation**

Customer billing comprises the accumulation, rating and invoicing of usage and recurring and non-recurring charges. In order to enable CLECs to bill their customers, BA-NY supplies CLECs with usage information for all switch-based wholesale customers (including resale and certain UNE) on a daily basis. BA-NY also provides CLECs with a monthly bill for the wholesale usage, recurring and non-recurring based charges payable by the CLEC for the network infrastructure utilized in providing the local telephone service to the wholesale customers. It is the CLEC's responsibility to generate recurring and non-recurring charges based on the customer's products and services, combine it with the usage charges and bill the end customer.

BA-NY uses existing systems to accumulate and provide CLECs with the usage billing information. However, additional functionality had to be added to the billing applications to accommodate the billing of non-recurring and recurring charges to CLECs, as well as to produce the wholesale bill. Additional functionality was added to the CRIS